that the drive is faulty due to non-detection of the data address mark. It should be noted here that while the data address mark as described is constructed by 2 bytes, it may be possible to construct the data address mark by 2 or more bytes.

As described above, the present invention has an advantage in that when one of the data address marks recorded with different patterns is normally detected, the data address mark of a corresponding data field is regarded as an effective value in order to maximize production yield of the disk drive due to non-detection of the data address mark.

IN THE CLAIMS

Please amend claims 3,4, 7 and 9, and add new claims 16 through 43, as follows:

3. (Amended) The method of claim 2, further comprised of each said data address mark recorded in said different recording locations of said data track being constructed of one byte of information.

4. (Amended) The method of claim 3, further comprised of bits constructing said one byte being utilized for recording said data address mark and for counting the number of a byte of said remaining data address mark.

7. (Amended) A method for forming and processing a data sector comprising an identification field and a data field in a magnetic disk of a headerless servo recording system,

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3   comprising the steps of:

4   recording a data address mark, during a recording mode, in at least two different locations

5   of said data field immediately preceding a data area containing user data;

6   detecting said data address mark recorded in said different locations of said data field, during

7   a reading mode, to confirm validity of user data contained in said data area following said data

8   address mark;

9   when said data address mark recorded in at least one of said different locations of said data

10   field is detected, regarding said data address mark detected as an effective data address mark of a

11   corresponding data area for confirming the validity of user data contained therein; and

12   skipping a remaining data address mark recorded in said different recording locations of said

13   data track, when said data address mark recorded in said at least one of said different recording

14   locations is detected.

1   9. (Amended) The method of claim 7, further comprised of each said data address mark

recorded in said different recording locations of said data field being constructed of one byte of

information.

(Newly Added)

1   16. A method of providing a data block in a magnetic recording medium for accessing user

2   data therefrom, comprising:

writing a first data address mark in said data block; and

4   writing a second data address mark in said data block.

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1   17. The method of providing said data block in accordance with claim 16,

2 wherein said step of writing said first data address mark comprises:

3   writing a first plurality of bits of a first bit pattern; and

4 wherein said step of writing said second data address mark comprises:

5   writing a second plurality of bits of a second bit pattern different from said first bit pattern.

1   18. The method of providing said data block in accordance with claim 17, wherein:

2   at least one bit of said first plurality of bits represents a first byte count signifying a first

3 number of bytes to be ignored when said first data address mark is normally read.

1   19. The method of providing said data block in accordance with claim 18, wherein:

2   at least one bit of said second plurality of bits represents a second byte count signifying a

3 second number of bytes to be ignored when said second data address mark is normally read.

1   20. A magnetic recording medium having a data track having one or more data blocks,

2 comprising:

3   a first data address mark; and

4   a second data address mark.

1   21. The magnetic recording medium according to claim 20, wherein:

2   'said first data address mark comprises a first plurality of bits of a first bit pattern; and

3   said second data address mark comprises a second plurality of bits of a second bit pattern

4   different from said first bit pattern.

1   22. The magnetic recording medium according to claim 21, further comprised of:

2   at least one bit of said first plurality of bits being a first byte count signifying a first number

3   of bytes to be ignored when said first data address mark is normally read.

1   23. The method of providing said data block in accordance with claim 22, wherein:

2   at least one bit of said second plurality of bits represents a second byte count signifying a

3   second number of bytes to be ignored when said second data address mark is normally read.

1   24. A disk drive device having a magnetic recording medium having at least one data block

2   that includes at least a first data address mark and a second data address mark, comprising:

3   a controller configured to read within said at least one data block at least one of said first data

     address mark and said second data address mark, and if said first data address mark is read

     successfully, synchronizing said data block with a user data access according to said first data

6   address mark, said controller synchronizing said data block with said user data access according to

7   said second data address mark if said second data address mark is read successfully.

1   25. The disk drive device according to claim 24, wherein:

2   said controller is further configured to read a predetermined number of bits from a

3   successfully read one of said at least first data address mark and said second data address mark, and

4   to determine a number of bytes to be ignored based on said predetermined number of bits.

1   26. A method for reading a data track of a memory disk, said method comprising the steps

2   of:

    recording at least two data address marks on the memory disk in a plurality of different

4   recording locations along said data track;

5   establishing synchronization by detecting a select one of said at least two data address marks

6   from one of said plurality of different recording locations; and

    characterizing the detected said data address mark as an effective data address mark of said

8   corresponding data region on said data track.

1   27. The method of claim 26, further comprised of skipping detection of other ones of said

2   at least two data address marks from subsequent ones of said different recording locations.

1   28. The method of claim 26, wherein said step of recording said at least two data address

2   marks comprises:

3   recording a first data address mark at a first one of said plurality of different locations, said

4   first data address mark comprising a first plurality of bits of a first bit pattern; and

5   recording a second data address mark at a second one of said plurality of different locations,

6   said second data address mark comprising a second plurality of bits of a second bit pattern different

7   from said first bit pattern.

1   29. The method of claim 28, wherein:

2   at least one bit of said first plurality of bits being a first byte count signifying a number of

3   bytes to be ignored when said first data address mark is normally read at said first one of said

4   plurality of different locations.

1   30. The method of providing said data block in accordance with claim 29, wherein:

    at least one bit of said second plurality of bits represents a second byte count signifying a

3   second number of bytes to be ignored when said second data address mark is normally read.

1   31. A method for preparing a memory disk, comprising:

2   recording a data address mark providing synchronization that enables reading of data from

3   the memory disk at a first location along a data track on the memory disk at a first location

4   preceding a corresponding data track; and

5   recording said data address mark at a second location preceding said corresponding data

track.

1   32. A disk drive device, comprising:

2   a head positioned to read, within each data block of a recording medium, a first data address

3   mark exhibiting a first bit pattern, and a second data address mark exhibiting a second and different

bit pattern; and

    a controller regulating movement of said head and discriminating between said first bit

6   pattern and said second bit pattern.

1   33. The device of claim 32, wherein:

2   said head reading within said first data address mark, an indication of a number of bytes to

3   be ignored within said data block subsequent to successfully reading of said first data address mark.

1   34. The device of claim 32, wherein:

2   said controller is further configured to read a predetermined number of bits from a

3   successfully read one of said first data address mark and said second data address mark, and to

4   determine a number of bytes to be ignored based on said predetermined number of bits.